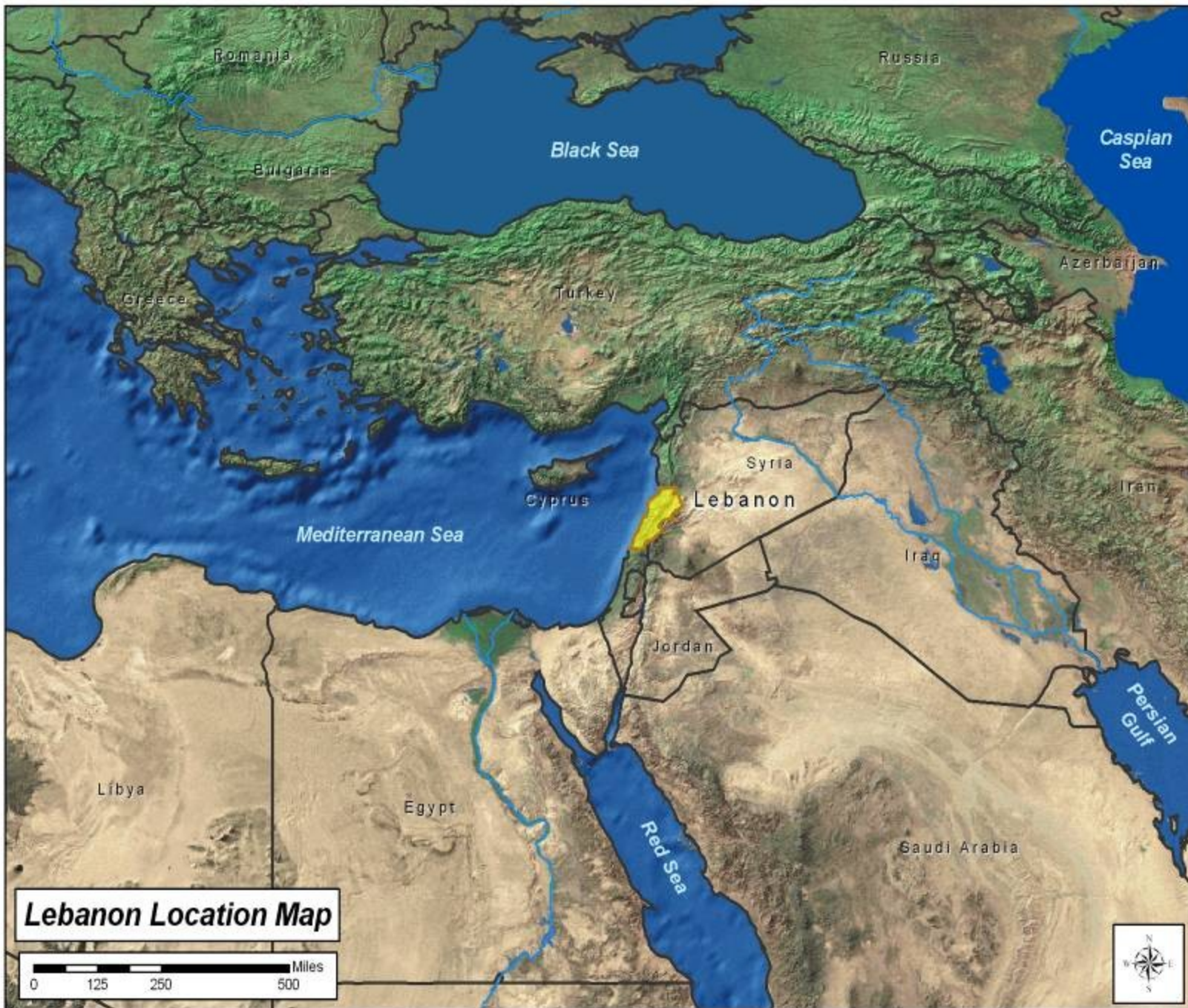


# LEBANON

- War damaged infrastructure
- Strained public health systems



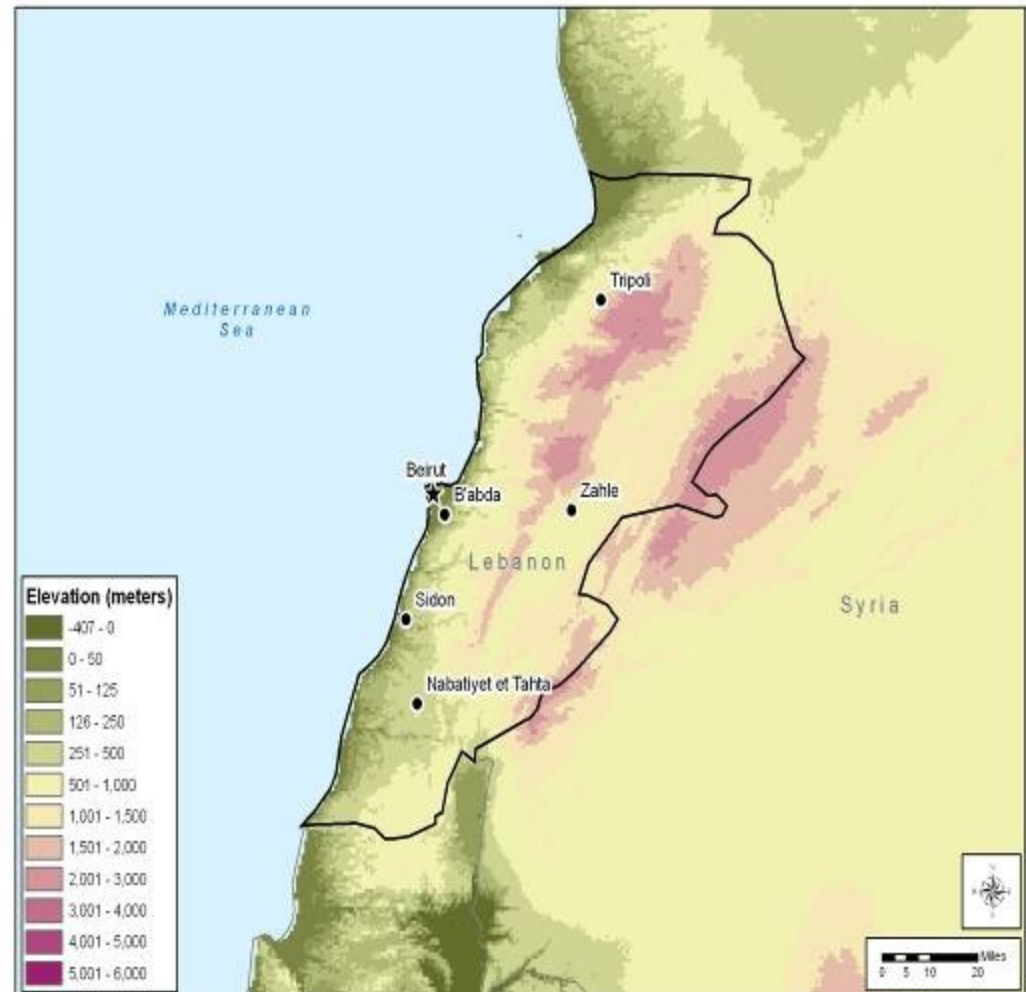
# Where in the world is Lebanon?





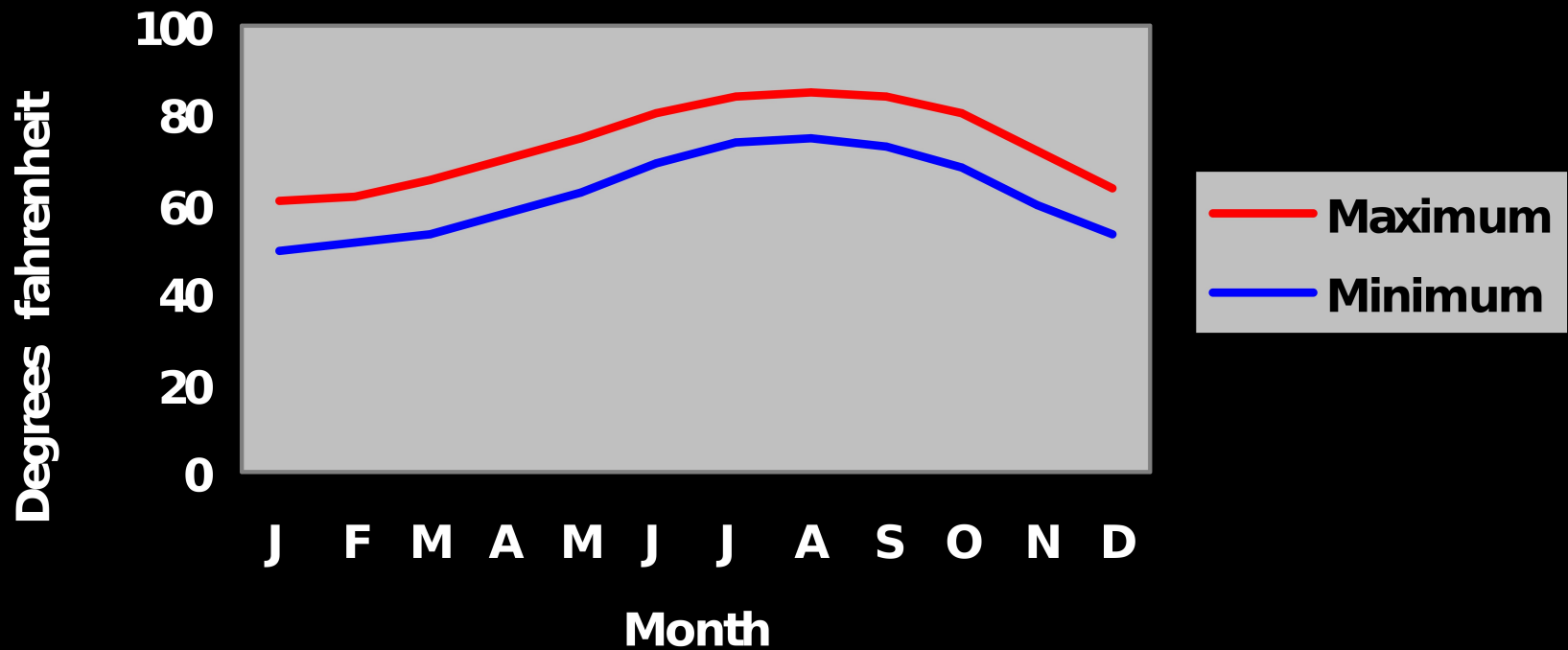
# Physical Environment

- **Topography**
  - About twice the size of Delaware
  - 4 geographic regions
    - Coastal plain, Mountains, Agriculture, Anti-mountain
- **Climate**
  - Varies by region
  - Hot summers along the coast, cold in the mountains



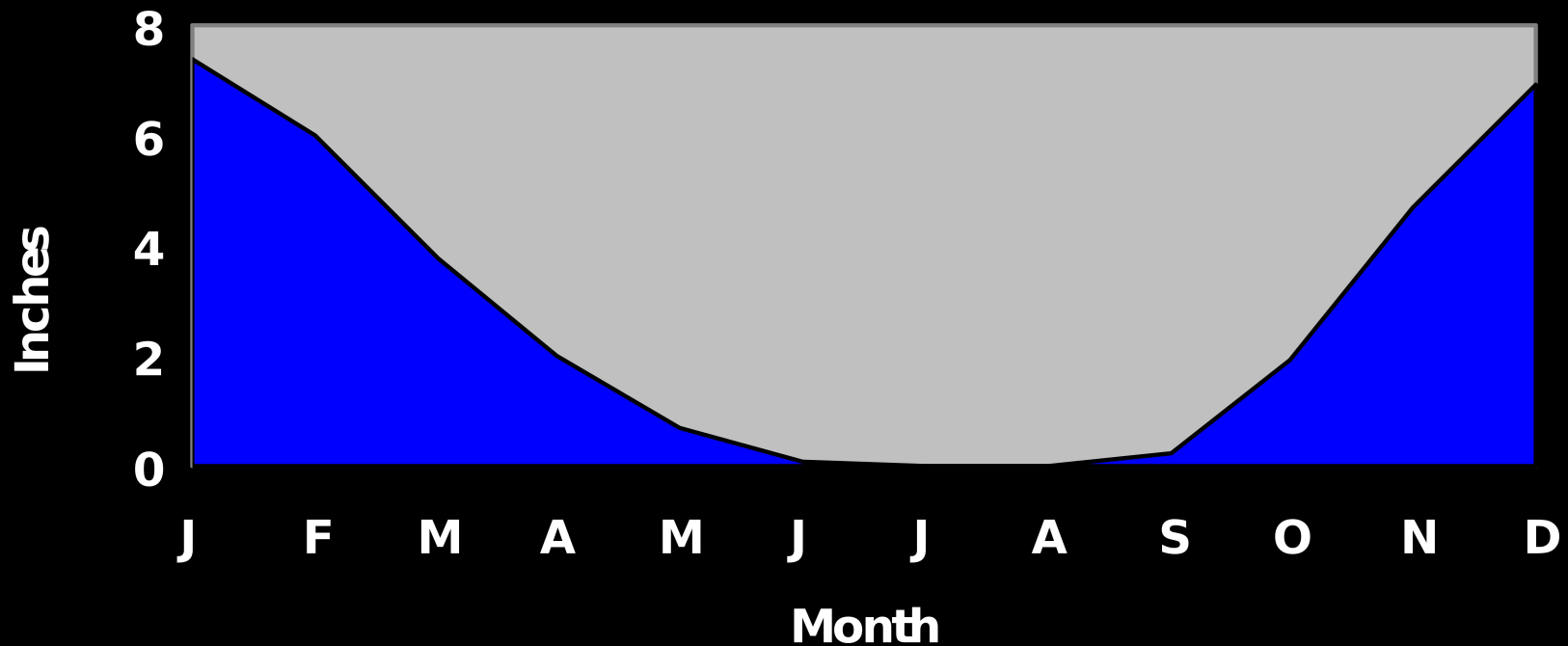
# Physical Environment

Average Max/Min Temperature in Beirut



# Physical Environment

Average Total Precipitation in Beirut



# Environmental Health Risk

- **Greatest short term risks associated with ingestion of contaminated food/water; extreme heat/cold; high altitude**
- **Greatest long term risks associated with exposure to heavy metals**



# Environmental Issues

- Air Contamination

- Short term risks

- Coughing and wheezing
    - Especially among people with asthma

- Lead levels high in Beirut

- Decreasing with phase out of leaded gas
    - Slightly about US standard in 2001

- Concentrations of respirable particulate matter smaller than 10 micrometers (PM-10) are high



# Environmental Issues Cont.

- Soil Contamination
  - Low risk to human health
  - Localized
- Water Contamination
  - Uncontrolled discharges
  - Overfertilization leading to high levels of nitrate





# Infectious Disease Risk Definitions

HIGH	INTERMEDIATE	LOW
<p><b>The main force health protection emphasis should be on these diseases, which are the most likely to degrade operations by affecting a large percentage of personnel, or by causing severe illness in a smaller percentage.</b></p>	<p><b>These diseases also warrant force protection emphasis. They are less likely to degrade operations because they generally affect smaller numbers of personnel, or cause mild symptoms.</b></p>	<p><b>Other militarily significant diseases that are likely to have a minimal impact on operational readiness. These diseases are not generally discussed in the Medical Threat Presentations.</b></p>

# Infectious Disease Risk

- **INTERMEDIATE RISK** for infectious diseases
- Inadequate force health protection (FHP) measures, will adversely impact mission effectiveness

# Infectious Diseases

- Foodborne and Waterborne Diseases
  - **HIGH RISK** = Diarrhea - bacterial, hepatitis A,
  - **INTERMEDIATE RISK** = diarrhea - protozoal, typhoid, paratyphoid
- FHP Priorities
  - **Deploy appropriate PM personnel and equipment**
  - Consume food, water, ice only from US-approved sources
  - Operate food preparation facilities in accordance with Army doctrine
  - Ensure proper hand washing facilities near all latrines and dining facilities and enforce

# Infectious Diseases Cont.

- Vector-borne Diseases

- **INTERMEDIATE RISK** = Leishmaniasis, Rickettsioses (tickborne), Sand fly fever, Sindbis virus, West Nile fever



- FHP Priorities

- Use DEET on all exposed skin
- Treat field uniforms with permethrin
- Use bed nets in field conditions, treat with permethrin



# Infectious Diseases Cont.

- Animal-contact Diseases
  - **INTERMEDIATE RISK** = Anthrax, Q-fever, Rabies
- FHP Priorities
  - Avoid animal contact (alive or dead), especially if an animal exhibits strange behavior
  - No mascots
  - Report all animal bites and scratches
  - Do not keep food in living areas
  - Dispose of trash properly



# Infectious Diseases Cont.

- Sexually Transmitted Diseases
  - **INTERMEDIATE RISK** = gonorrhea/chlamydia, HIV/AIDS, Hepatitis B
- FHP Priorities
  - Avoid sexual contact
  - Use latex condoms if sexually active



# Infectious Diseases Cont.

- Water-contact Diseases
  - **INTERMEDIATE RISK** = leptospirosis
- FHP Priorities
  - avoid unnecessary contact with lakes, rivers, streams, and other surface water

**There will not be a sign like this.**

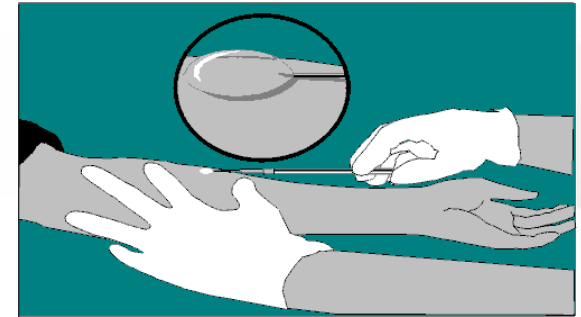
**LEPTOSPIROSIS  
HEALTH HAZARD**

FRESH WATER STREAMS AND MUD  
POSSIBLY POLLUTED WITH BACTERIA

SWIM, BOAT,  
OR HIKE AT YOUR OWN RISK

# Infectious Diseases Cont.

- Respiratory Diseases
  - **LOW RISK** = tuberculosis



- FHP Priorities
  - 72 sqft/person and head-to-toe sleeping arrangement
  - Cough or sneeze into your upper sleeve instead of your hands
  - Wash hands at every opportunity
  - Avoid close contact with local population



# Hazardous Animals & Plants

- Animals

- Rabid dogs, snakes, centipedes, scorpions, spiders



- Plants

- Mexican Poppy, Fetid Nightshade



- FHP Priorities

- Do not handle animals
- Shake out boots, clothing, & bedding
- Do not touch, chew, eat, or burn unfamiliar plants



# SUMMARY

- Physical Environment
- Infectious Diseases = **INTERMEDIATE RISK**
- Hazardous Animals and Plants
- FHP measures are simple and effective
  - Use and Enforce
  - Will conserve the fighting strength

